COUNTY OF SARPY, NEBRASKA

SPECIFICATIONS

Two (2) New Fourteen Foot (14') Dump Bodies with Hydraulic Systems

For the

Public Works Department

PROPOSALS DUE:

2:00 p.m., Thursday, June 6, 2013

General Information

Notice to Vendors

Sarpy County is seeking proposals for Two (2) New Fourteen Foot (14') Dump Bodies with Hydraulic Systems for the Public Works Department. The dump bodies will be mounted on 64,000 GVWR Tandem Axle Cab Chassis.

Sealed bids will be received Monday through Friday 8:00 a.m. to 4:45 p.m. except holidays, until 2:00 p.m., Thursday, June 6, 2013. Bids shall be in a sealed envelope, clearly marked "Sealed Bid – Two (2) New Fourteen Foot (14') Dump Bodies with Hydraulic Systems" and shall have the name of the Vendor, and the time and date of the bid opening. **Do not fax bids, only sealed bids will be accepted.**

Requests for information and clarification questions must be received by 12:00 p.m., May 30, 2013 at 12:00 P.M. in order for Sarpy County to have time to issue an addendum.

Bidding criteria must be received from Beth Garber, Purchaser, 1210 Golden Gate Drive, Papillion, NE 68046, (402) 593-4476, bgarber@sarpy.com or via the internet at www.sarpy.com.

Vendors that obtain specifications from the internet sites are responsible for obtaining any addenda that may be added at a later time.

Bids must be sent to:

Deb Houghtaling
Sarpy County Clerk's Office
1210 Golden Gate Drive
Papillion, NE 68046

Bids not addressed and delivered to the above person will not be considered. Bids received after the above stated time and date will not be considered.

Bid opening will be a public opening to be held in the Sarpy County Administrative Conference Room at 1210 Golden Gate Drive, Papillion, NE. The bid opening will be at 2:00 p.m., Thursday, June 6, 2013.

All bids submitted shall be valid for a period of sixty (60) days following the final date for submission of bids.

Sarpy County will not be liable for costs incurred by Vendors for proposal preparation, printing, demonstration, or any other costs associated with or incurred in reliance on proposal creation. All such costs shall be the responsibility of the Vendor.

The bids shall include all charges and applicable taxes, F.O.B., 15100 S. 84th Street, Papillion, Nebraska. The Vendor need not include sales tax in the bid. Sarpy County will, upon request, furnish the successful Vendor with a completed State of Nebraska Tax Exempt Form 13 upon acceptance of the successful Vendor's proposal.

The Sarpy County Board of Commissioners reserves the right to reject any or all bids and to waive minor informalities.

In the event of conflict between unit price and extended price, unit price shall prevail.

Procedures for Evaluation and Awarding of Bid

Evaluation will be done by Beth Garber, Sarpy County Purchaser along with personnel from the Public Works Department. After evaluation the Purchaser will make a recommendation to the County Board of Commissioners for award. This recommendation and pending award will be made at a public meeting of the Board of Commissioners. Agendas are available each Friday afternoon on our internet site www.sarpy.com. The Commissioners award the bid by majority vote.

The following factors will be used to consider the award of the bid, where applicable:

a) Compliance with all requirements.
b) Price.
c) The ability, capability, and skills of the Vendor to perform.
d) The character, integrity, reputation, judgment, experience, and efficiency of the Vendor.
e) The quality of previous performance.
f) Whether the Vendor can perform within the time specified.
g) The previous and existing compliance of the supplier with laws.
h) The life-cost of the personal property or services in relation to the purchase price and specified use.
i) The performance of the personal property or service taking into consideration any commonly accepted tests and standards of product, service, usability and user requirements.
j) The energy efficiency ratio as stated by the supplier.
k) The life-cycle costs between alternatives for all classes of equipment, the evidence of expected life, the repair and maintenance costs, and the energy consumption on a per year basis.
l) Such other information as may be secured having a bearing on the decision.

Terms and Conditions

1. **Information, Discussion, and Disclosures**

   Any information provided by Sarpy County to any Vendor prior to the release of this Request for Proposal ("RFP"), verbally or in writing, is considered preliminary and is not binding on Sarpy County.

   The Vendor must not make available nor discuss any cost information contained in the sealed copy of the proposal to or with any employee of Sarpy County from the date of issuance of this RFP until the contract award has been announced, unless allowed by the Sarpy County Purchasing Department in writing for the purpose of clarification or evaluation.

   No interpretation of the meaning of the specifications, or other bidding documents, nor correction of any ambiguity, inconsistency, or error therein will be made orally to any Vendor.

   Every request for such interpretation or correction should be in writing, addressed to the Sarpy County Purchaser, Beth Garber, 1210 Golden Gate Drive, Papillion, NE 68046 or bgarber@sarpy.com. **Requests must be received by 12:00 p.m., May 30, 2013 in order for**

Sarpy County to have time to issue an addendum. Requests received after deadline may not be considered. In case Sarpy County finds it expedient to supplement, modify, or interpret any portion of the bidding documents prior to the proposed bid date, such procedure will be accomplished by the issuance of written addenda to the RFP which will be mailed or delivered to all prospective Vendors at the respective addresses furnished for such purpose.

2. Addenda

All addenda will become part of this RFP and must be responded to by each Vendor.

All addenda must be acknowledged in writing in the bid submitted by the Vendor.

This RFP, any subsequent addenda, and any written responses to questions take precedence over any information previously provided.

3. Confidentiality of Documents

Sarpy County considers all information, documentation and other materials requested to be submitted in response to this proposal to be of a non-confidential and/or non-proprietary nature and therefore shall be subject to public disclosure under Neb. Rev. Stat. § 84-712.05(3).

Vendors are hereby notified that Sarpy County strictly adheres to all statutes, court decisions, and opinions of the Nebraska Attorney General with respect to disclosure of RFP information.

Any "proprietary, trade secret, or confidential commercial or financial" information must be clearly identified, in a separate sealed envelope, at the time of bid/proposal submission. **Pricing information is not considered financial information and therefore is not considered Confidential.** Please note: even if Vendor believes pricing information is confidential and includes it in a separate, sealed envelope, such information will be read aloud and entered into record during the public bid opening. For all other appropriately identified proprietary, trade secret, or confidential commercial or financial information, the Vendor will be required to fully defend, in all forums, Sarpy County's refusal to produce such information; otherwise, Sarpy County will make such information public upon request.

4. Non-Discrimination Clause

Pursuant to Neb. Rev. Stat. §73-102 (Reissue 1996), Vendor declares, promises, and warrants it has and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A. §1985, et seq.), and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. §48-1101, et seq. (Reissue 2004), in that there shall be no discrimination against any employee who is employed in the performance of this Contract, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

5. Conflict of Interest Clause

Pursuant to Neb Rev. Stat. §23-3113 (Reissue 1997), the parties hereto declare and affirm that no officer, member, or employee of the County, and no member of its governing body, and no other public official of the County who exercises any functions or responsibilities in the review

or approval of the undertaking described in this Contract, or the performing of services pursuant to this Contract, shall participate in any decision relating to this Contract which affects his or her personal interest, or any corporation, partnership, or association in which he or she is directly or indirectly interested; nor shall any employee of the County, nor any member of its governing body, have any interest, direct or indirect, in this Contract or the proceeds thereof.

6. Payment Terms

The successful Vendor shall submit a monthly itemized invoice for payment. Sarpy County will make payment to the successful Vendor within thirty (30) days after receipt of invoice and satisfactory delivery.

7. Supplemental Terms and Conditions/Modifications

Any supplemental terms, conditions, modifications, or waiver of these terms and conditions must be in writing and signed by the Sarpy County Board Chairman and the Vendor.

8. Termination

Either party may terminate the Contract with ninety (90) days' written notice to the other.

9. Residency Verification

The Vendor agrees to comply with the residency verification requirements of Neb. Rev. Stat. §4-108 through §4-114. The Vendor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Vendor is an individual or sole proprietorship, the following applies:

a) The Vendor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at www.das.state.ne.us.

b) If the Vendor indicates on such attestation form that he or she is a qualified alien, the Vendor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Vendor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

c) The Vendor understands and agrees that lawful presence in the United States is required and the Vendor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. Sect. 4-108.

10. Breach

Should Vendor breach, violate, or abrogate any term, condition, clause or provision of this agreement, the County shall notify Vendor in writing that such an action has occurred. If satisfactory provision does not occur within ten (10) days from such written notice the County may, at its option, terminate this agreement and obtain an alternate provider to provide all required materials. This provision shall not preclude the pursuit of other remedies for breach of contract as allowed by law.

11. Assignment

The Vendor may not assign this Contract without the prior written consent of the County.

12. Subcontracting

Vendor may not subcontract the work to be performed, without prior written consent of the County. If such consent is granted, Vendor will retain responsibility for all work associated with the Contract. The Vendor must identify any subcontractors it intends to use in the execution of this Contract. The Vendor must identify subcontractors in writing within the proposal.

13. Independent Contractor

The Vendor shall in the performance of the Contract at all times be an independent contractor and not an employee or agent of the County. The Vendor, its officers, employees and agents shall at no time represent the Vendor to be other than an independent contractor or represent themselves to be other than employees of the Vendor.

14. Indemnity

The Vendor shall indemnify and save harmless Sarpy County, its officers, employees and agents from all loss, claims, suits or actions of every kind and character made upon or brought against Sarpy County, its officers, employees, or agents, for or sustained by any party or parties as a result of any act, error, omission or negligence of said Vendor or its servants, agents, and subcontractors; and also from all claims of damage in fulfilling this Contract.

Specifications

The dump body with hydraulic system shall be a new current model of proven performance and under standard production by the manufacturer. Units are to be of standard design, complete as regularly advertised and marketed. All necessary parts for satisfactory operation of the dump boxes with hydraulic systems shall be furnished whether or not they may be specifically mentioned below.

The chassis provided by Sarpy County 2014 Mack GU713 Granite.

1. <u>Company Information:</u>

Vendor will provide the following company information on the bid form:

1. Years in business
2. Number of employees
3. Total sales for last three (3) years.

2. References:

Each Vendor must include with its proposal a list of no less than three (3) references that have purchased the specified product or service within the last two (2) years. The list must include the name of the company and the name and phone number of a contact person for each company.

3. Literature:

Three (3) sets of detailed specifications or advertising literature with cuts or photographs shall be furnished with the quotation on the identical boxes to be furnished. ANY INFORMATION NECESSARY TO SHOW COMPLIANCE WITH THESE REQUIREMENTS NOT GIVEN ON THE ATTACHED ADVERTISING DATA SHEETS SHALL BE SUPPLIED IN WRITING AND ATTACHED TO THE BID PROPOSAL. Lack of sufficient information supplied with a proposal is cause for automatic rejection of such bid. Dump Boxes with Hydraulic Systems shall comply with or exceed the requirements specified in these bid specifications.

4. Deviations:

Once the bid has been accepted by Sarpy County, no deviations from the specifications will be accepted without prior written approval of Sarpy County.

5. Delivery:

To be coordinated with Sarpy County Fleet Services, 15100 S 84th Street, Papillion Nebraska. The equipment will be accepted by a representative of the Fleet Services Department. State approximate delivery date in the space provided on the Bid Form. Delivery can be taken Monday through Friday, except holidays, 7:00 a.m. to 3:30 p.m. Vendor will provide with the Bid delivery date to Sarpy County. Contact Fleet Service at 402-537-6980, 24 hours prior to delivery.

6. Exceptions:

These specifications are minimum acceptable specifications. Vendor may bid other than what is specified if it is of higher specification than what is requested. Vendor must list any exceptions to the bid specifications on the exceptions/clarification/comment page provided. Indicate acceptance or exception by marking YES / NO for each specification listed. Any unmarked YES / NO line will be noted as “exception to the specification”.

7. Warranty:

A copy of all manufacturer warranties shall be included in Vendors proposal.

A full two (2) year unconditional warranty/guarantee on body, hoist, pump, hydraulic lines, reservoir, control valves and installation is required. Please provide terms of warranty in the area provided in Section VI below.

YES/NO

Technical Specifications

Any reference to brand names and/or number in the Request for Proposal is intended to be descriptive, but not restrictive, unless otherwise specified. Other brands, of approved equal quality, may be considered for award. In the event of substitution, your proposal must clearly describe the article and the proposal must state the brand name and product number of the substitution offered. The determination of the Sarpy County Purchasing Department, in consultation with the ordering office, shall be final and conclusive in determining the equality of alternates.

I. DUMP BOX BODY

A. Dump body shall be a heavy duty steel western style with a non-cross-member type design.

___/___ 1. Body shall be a minimum 180,000 P.S.I. tensile strength, 3/16 inch thick - AR400 steel. Floor shall be a minimum 180,000 P.S.I. tensile strength 1/4 inch thick - AR400 steel.

___/___ 2. Body shall be sloping running board type with non-cross-member sub frame.

___/___ 3. Dump body shall be fourteen feet (14') long.

___/___ 4. Inside width of dump body shall be seven feet (7').

___/___ 5. Sides shall be a minimum of forty-four inches (44") in height.

___/___ 6. Body ends are twelve inches (12") higher than the sides with pockets for extension sideboards.

___/___ 7. Pockets shall accept a 3" x 12" full bridge plank, pockets made of 1/4 inch steel, 12 inch (12") high, three (3) pockets per side, front, middle and rear.

___/___ 8. Two (2) body props: one (1) left hand and one (1) right hand are required.

___/___ 9. Left front body side shall have steps and two (2) hand holds for operator access to top of body. Steps shall be made of extruded grip-strut type material.

___/___ 10. Sub-frame to accept a single cylinder front mounted telescopic hoist.

B. Body Floor

___/___ 1. Minimum thickness 1/4 inch - AR 400 steel.

___/___ 2. One (1) piece floor design.

YES/NO

___/___ 3. 180,000 P.S.I. minimum tensile strength.

___/___ 4. Floor to side joint shall have a radius design.

C. Body Sides

___/___ 1. 3/16 inch thick minimum AR400 steel.

___/___ 2. 180,000 P.S.I. tensile strength minimum.

___/___ 3. Each side shall be reinforced by vertical and horizontal box sections, and have sloped angles to shed dirt and debris.

___/___ 4. Side top rails shall be formed to a boxed section.

___/___ 5. Rear corner post shall be of the one (1) piece design. Rear corner post shall be full depth from the top of the gate to the bottom of the rear cross member and fabricated of one sheet to a box section.

___/___ 6. Chain slot brackets shall be welded on the top rear corners (53") up from the bottom edge of the corner post. The lower chain slot brackets shall be welded (15") up from the bottom edge of the corner post.

D. Front Head

___/___ 1. 3/16 inch thick minimum AR400 steel.

___/___ 2. 180,000 P.S.I. tensile strength steel.

___/___ 3. One (1) piece design.

___/___ 4. Specify type design

_____

_____

E. Tailgate

___/___ 1. 3/16 inch thick minimum AR400 steel.

___/___ 2. 180,000 P.S.I. tensile strength steel.

___/___ 3. All tailgate seams to be continuously welded. Skip welding will not be accepted.

___/___ 4. Top horizontal brace shall be full width boxed type design and welded to tailgate frame.

YES/NO

___/___ 5. Tailgate shall have horizontal or vertical braces. All horizontal sections shall be tapered to shed debris.

___/___ 6. Tailgate upper hinges shall be offset type constructed from 3/4 inch steel.

___/___ 7. Tailgate shall have vertical end braces extending from offset hinge to 1-1/4 inch diameter lower pins.

___/___ 8. Spreading chains shall be welded below the top horizontal brace on the inside edge of the tailgate. The chains will extend 72" to reach the lower brackets on the inside edge of the tailgate. The chains will go through the brackets to the lower chain slot brackets to secure and adjust the tailgate. Spreading chains shall be a minimum of 3/8 inch.

___/___ 9. Tailgate shall have solenoid activated air operated bottom latch with control in cab.

___/___ 10. Bottom latch shall be over the center type with steel or cast iron hardware. Latching mechanism shall be independently adjustable.

___/___ 11. Air cylinder to be double acting type and retracted when tailgate is closed. Air cylinder rod shall be stainless steel.

___/___ 12. A warning light in the cab shall indicate when tail gate is released.

F. Hoist Well

___/___ 1. 3/16 inch thick minimum AR400 steel.

___/___ 2. 180,000 P.S.I. tensile strength steel.

___/___ 3. Extension into body not to exceed one (1) foot.

G. Cab Protector Shield

___/___ 1. 3/16 inch thick minimum AR400 steel.

___/___ 2. 180,000 P.S.I. tensile strength steel.

___/___ 3. Half cab protection.

___/___ 4. Cab protector shield shall be reasonably close to top of cab.

___/___ 5. Cab protector shield shall be same width as widest part of cab above doors.

___/___ 6. All seams to be continuously welded. Skip welding will not be accepted.

YES/NO

___/___ 7. Cap protector shall meet all OSHA standards.

___/___ 8. Cab protector shall have provisions that will allow draining of water.

___/___ 9. Cab protector installation and alterations shall be provided as needed for chassis provided.

H. Hoist System

___/___ 1. Hoist designed for lowest body mounting.

___/___ 2. NTEA Classification 100 minimum.

State NTEA Classification _____

___/___ 3. High polished, hard-chrome cylinder

___/___ 4. Composite bearing in all joints for grease free operation.

State Manufacturer and Model of Hoist:

Hoist Manufacturer _____

Hoist Model _____

___/___ 5. Minimum dump angle shall be fifty (50) degrees.

___/___ 6. Cylinder shall have the length of stroke as required by the body manufacturer. A lift limit system shall be provided to stop the flow of hydraulic oil to the cylinder. Lift limit system shall be electrically adjustable in a weather proof enclosure.

Note: Box location and mounting will be inspected prior to welding in place by Fleet Service.

I. Body Finish

___/___ 1. Dump body, cab protector, understructure, piping, pump and hydraulic components must be thoroughly cleaned and metal treated per paint manufacturer's recommendation.

___/___ 2. Metal will be completely primed with rust inhibitive primer/sealer that is recommended by the paint manufacturer and compatible with top coat. Minimum of two (2) coats primer on all components is required.

___/___ 3. Automotive seam sealer will be applied to all open seams.

YES/NO

___/___ 4. Top coat shall be multiple coats of activator hardened acrylic or polyurethane paint and be two (2) mil to three (3) mil thickness. Color shall match cab chassis body white.

___/___ 5. Paint and primer application must be of high quality.

___/___ 6. Under-structure, piping, pumps and frame areas shall be painted with two (2) coats of black paint.

___/___ 7. Bidder must submit information on brand, type of paint and primer:

Paint manufacturer _____

Paint type _____

Primer _____

J. Lights/Equipment

___/___ 1. Lights to comply with D.O.T. Federal and State safety regulations.

___/___ 2. All lights to be recessed into body.

___/___ 3. Rear oval stop/ turn signal, marker lights and oval backup lights - one (1) each side in rear vertical end braces.

___/___ 4. Whelen three-light package system, Dot3702A installed.

___/___ 5. Rear strobe light assembly mounted in rear vertical end braces.

___/___ 6. Front strobe mounted on roof of truck cab per Fleet Service approval.

___/___ 7. All wiring, light fixtures and connections mounted to protect from adverse weather operating conditions in snow, mud, rock, etc.

___/___ 8. All electrical connections shall be properly soldered and weather sealed with heat shrink.

___/___ 9. All wiring and connections shall meet Truck Chassis manufacturer's recommendations for body installations.

___/___ 10. Body shall be equipped with four (4) rubber anti-sail mud flaps mounted in front and back of tandems. Front mud flaps can either be mounted to the dump body or the chassis frame with steel supports.

YES/NO

II. HYDRAULIC SYSTEM

A. Hydraulic system

___/___ 1. The hydraulic system shall provide hydraulic power for the operation of the hoist and dump body operation, salt/sanding hopper system, and snow plow operation.

___/___ 2. All individual components of the hydraulic system shall be equipped with pressure limiters which will supply only the necessary working pressure required by the manufacturer.

B. Hydraulic Pump

___/___ 1. The hydraulic pump shall be a U.S. manufactured axial piston pressure and flow compensated load-sensing type. The pump shall be cast iron construction and rated to 4.67 cubic inches per revolution at maximum stroke which will deliver 19.2 GPM @ 1000 RPM. The pump shall have a 2" inch suction line and ¾" case drain line plumbed directly back to the reservoir. The pump shall be rated for 4000 PSI maximum and 3500 PSI continuous. The pump shall have a severe duty, high pressure outboard Teflon shaft seal that protects the pump shaft bearing and seal from external contamination and salt spray. The pump shall have a 1¼" keyed drive shaft and SAE type C mounting flange. The pump shall be a Force America FASD34R or prior approved equal.

State make, model, size and type of pump

_____

_____

C. PTO

___/___ 1. The power take off (PTO) shall be mounted to an Allison automatic 4500 RDS transmission. The PTO shall be a hotshift type and rated to run at 90-110% of engine RPM. The PTO shall be rated to handle a constant torque of 200 ft/lb. The output shaft shall be 1-1/4" keyed. The PTO shall be a Parker Chelsea 277 series or approved equal.

___/___ 2. PTO will be connected to transmission with a wiring harness and will interface with Transmission ECM for PTO control. PTO will be engaged by rocker switch on control console in cab with red pilot light indicating PTO engagement. PTO to be engaged only when the engine speed is at idle and vehicle speed is less than fifteen (15) mph. PTO is to disengage when vehicle speed exceeds thirty-seven (37) mph.

YES/NO

NOTE: ***Contact Purchasing in writing for information about PTO type and set-up. Fax number (402) 593-4304 or email bgarber@sarpy.com.***

NOTE: ***See Attachment C for PTO wiring***

State Manufacturer, model and type of PTO:

_____

D. Shut Down

___/___ 1. Shut down System: There shall be a sensor for low oil mounted in the reservoir. It will be a normally open circuit. When oil reaches a critical level this circuit will close sending a signal to the hot shift powering it off, disengaging the pump and shutting off the flow of oil to the system. at the same time a signal will be sent to an indicator mounted in the control center alerting the operator of system shutdown. A low level oil manual override switch will allow the operator to momentarily override the system shutdown to raise the plow or lower the dump body in order to return to a maintenance facility.

E. Mounting

___/___ 1. The hydraulic pump shall be mounted with shaft centerline parallel to the PTO output shaft centerline and at a level to create not more than a **three-degrees of angle** on the driveline. The pump mounting shall be incorporated with a bracket fabricated to mount in the frame rails of the truck.

F. Drive line

___/___ 1. The hydraulic pump shall be driven directly off the PTO output shaft via a splined driveline to allow for movement. The driveline shall include grease fittings on both u-joints. Driveline shall be a **Force America model 1310 series or approved equal.**

G. Reservoir/ Valve Enclosure

___/___ 1. The hydraulic reservoir will be of 35 gallons nominal capacity.

___/___ 2. The hydraulic reservoir will be constructed of 10-gauge stainless steel and be internally baffled.

___/___ 3. Mounting bracket is to be designed and supplied by the reservoir supplier.

___/___ 4. Mounting system should allow for a 1” frame clearance for frame

YES/NO

obstructions.

___/___ 5. Tank shall be mounted in a manner as to not transmit any truck torsional loads through the tank.

___/___ 6. The enclosure will use a gasket-less passive technology. (No rubber seals, gaskets, or weather stripping.)

___/___ 7. The enclosure lid will be removable within seconds by one person without the use of tools.

___/___ 8. All valve fittings, hose ends, filter, filler breather, sending units and any electrical connections are to be protected by enclosure cover.

___/___ 9. The reservoir supplier will provide all valve fittings (JIC connections) and plumb the return line from the valve to the filter.

___/___ 10. The cover will protect from both road and pressure washer spray.

___/___ 11. The use of bulkhead fittings is not permitted.

___/___ 12. The directional control valve must be easily accessible from all (6) sides without the use of tools.

___/___ 13. Hose exit and entrance must allow for components to be mounted adjacent to the enclosure.

___/___ 14. A 2" full flow brass ball valve shall be plumbed at the suction port of the tank.

___/___ 15. A low oil/high temp sending unit shall be mounted in the reservoir.

___/___ 16. The valve/tank assembly shall be a **Force America model "VT35 Valve/Tank Assembly"** or prior approved equal.

H. Hydraulic Filter System

___/___ 1. Hydraulic oil filter shall be mounted in the reservoir. Hydraulic filter shall be a16-micron absolute and rated for no less than 60 GPM. Filter shall be model **TEF31016VG16SP-UG60E115** or prior approved equal and include visual and electrical bypass indicators. A warning light shall be mounted in the cab and wired to the electrical indicator. The system shall be delivered with one spare filter element.

I. Hydraulic Control Valve

___/___ 2. The hydraulic valve shall be of modular manifold design. Each hydraulic function requires an individual manifold stacked together to form the

YES/NO

manifold base. The manifold base shall consist of an inlet section with SAE #16 inlet porting, SAE #20 outlet porting, and SAE #4 load sense porting. There shall be a main system relief in the inlet section to protect the system from high pressure in case the pump compensators fail. The dump body manifold shall be stacked next to the inlet section, and capable of 40 GPM with SAE #12 porting. The hydraulic control valves shall be pulse-width modulated, proportionally controlled. Each hydraulic valve segment shall be individually mounted to the manifold base assembly and be serviceable without removing any hydraulic hoses or any other hydraulic valve segments. Each hydraulic valve segment shall have individual pressure compensation to achieve independent simultaneous operations. All segments shall have heavy-duty continuous duty coils and connections shall be with Din connectors. All coils shall operate at 12 VDC and require a maximum of 1400 mille-amps. Each segment shall be equipped with a manual override except for the auger and spinner sections. The dump body segment shall be rated to 40 GPM, with all other segments rated to 20 GPM. If a double acting hoist is utilized, the dump body segment shall be equipped with a down side relief to protect the body down function. This relief shall be set to the hoist manufacturers specifications. Valve segments shall be **Force America Add-A-Fold® 4020** model or prior approved equal.

The valve is to be arranged as follows:

Hoist:	40 GPM, 4-way with 500 PSI down side work port relief valve
Plow lift:	21 GPM, 4-way with float mode capabilities
Plow angle:	21 GPM, 4-way
Auger:	14 GPM, 2-way proportional cartridge
Spinner:	7 GPM, 2-way proportional cartridge

J. Hydraulic - Piping, Fittings, Coupler, Hoses

___/___ 1. All hydraulic lines and plumbing shall be of sufficient capacity so as not to create heat or turbulence within hydraulic system. Suction line between reservoir and pump shall be a minimum of 2 in. I.D. with a minimum SAE 100-R4 rating and shall be secured on both ends via heavy duty banding straps, radiator hose clamps unacceptable. All pressure hoses, including signal sense to pump shall have swivel fittings on both ends and have a minimum SAE 100-R2 rating. Return lines and case drain shall have minimum SAE 100-R1 rating.

___/___ 2. Hydraulic lines shall be routed to minimize interference with equipment and chassis components requiring periodic servicing. Support brackets, grommets, and tie wraps shall be provided where appropriate to protect lines from damage by abrasion, cutting or impact.

YES/NO

___/___ 3. Hoses shall not be routed near exhaust manifolds pipes, bolts, sharp edges, and exhaust system to prevent wear, fatigue, or fire. Pipe fittings are not acceptable in any high-pressure line. Maximum distance between support clamps on all hydraulic lines shall be 24 inches.

___/___ 4. Installer shall provide hydraulic quick couplers for plow reversing cylinders. Two (2) Aeroquip 5601-8-10S and two (2) Aeroquip 5602-8-10S.

NOTE: ***Location and mounting instructions per Sarpy Fleet Services.***

___/___ 5. Velocity fuse on main hydraulic line by pump to lock up if failure of hydraulic hoses.

___/___ 6. Installer shall provide hydraulic quick couplers for sander/spreader. Coupler shall be securely mounted for ease of coupling at rear of dump body. The preferred location is between rear frame rails.

Aeroquip brand.
(1) 5602-16-16S – Male end on return line.
(1) 5601-12-12S - Female end on conveyor line.
(1) 5602-12-12S – Male end on spinner line.

NOTE: ***See Attachment A for spreader hose and coupler configuration.***

III. CAB CONTROL CENTER

___/___ 1. Controls for all valve functions and electronic spreader control will be integrated into a single, self-contained control center. The control center shall be a padded armrest style that is ergonomically designed. Control center shall be modular in design for ease of installation and service, and wiring and connectors shall be keyed and color-coded throughout. All components must be durable for long life and trouble free operation.

___/___ 2. The electronic controller shall be a fully proportional multi-stick controller to operate all cylinder functions. Multi-stick PWM driver electronics shall include as standard the capability to control at least 9 proportional outputs simultaneously. The control is available in a 3-stick or 4-stick configuration. Controls for spreader must be located on armrest at the operator's fingertips. There shall also be four auxiliary rocker switches available with an additional fifth switch being the main power switch for the spreader control. The switches shall be located between the joysticks and spreader control interface and each shall be rated for 15 amps continuous current minimum. Console options shall be capable of supplying full rated power to switch outputs when all four auxiliary switches are at full 15 amp load.

YES/NO

SWITCHES

1. PTO: on/off
2. Tail gate: open/closed
3. Strobe lights: on/off
4. Plow lights: on/off

___/___ 3. For ease of operation the multi-stick control shall include the following features: LED-backlit nomenclature for all joystick functions and a momentary push-button at the top of the hoist stick to provide hoist -interlock. The "Hoist" decal shall be illuminated amber while disabled, and change to green backlighting when the driver engages the hoist interlock button. The green "Hoist" LEDs shall remain illuminated while the hoist is under operation and shall time-out after a period of hoist inactivity that is selectable from 0 to 15 seconds. To ensure longevity of performance all lighting to be solid-state LED technology. The use of incandescent lamps or EL backlighting is unacceptable

___/___ 4. The plow, wing, scraper, or other joysticks shall have the option to include a momentary pushbutton for activation of remote spreader standby, remote spreader blast, or electric joystick interlock. The multi-stick communication hardware/software shall include 4 integral float options. The use of add-on float modules is unacceptable. For flexibility of use the integral float programming shall have the following standard features:

1. (4) axis functional float on any or all of the outputs with selectable forward/back, right/left functionality

2. 3-way or 4-way functionality

3. Selectable (3) second float delay timer

4. Optional float enable switch inputs

5. When float output for a given joystick function is active, the LED backlit nomenclature shall blink ON/OFF to provide visual feedback to the operator that the float function is engaged.

___/___ 5. All function joysticks shall be of contact-less Hall-effect design and offer up to a 5-Million cycle life. The use of potentiometers is unacceptable. To increase safety of operation, joystick communication hardware/software shall include the following standard features:

1. Input power monitor circuitry with power quality diagnostics

2. Redundant dual-reference joystick signals for each joystick axis

YES/NO

3. Joystick input off-center checking on all axes and output shutdown on system power-up

4. Joystick out-of-range fault condition checking and output shutdown

5. True outputs off with joystick centered

6. LED backlit nomenclature shall illuminate and flash RED when any error condition exists and an audible alarm shall sound

7. Technology that is capable of using a supervisor key to provide access to the calibration parameters without the access code. The entire operator interface shall be backlit and encased in flexible silicone material with wear – limiting coating applied to the base silicone material. The LED-backlit nomenclature shall blink ON/OFF with increasing frequency as the corresponding function is increased in speed to give the operator visual feedback of each joystick output.

___/___ 6. Multi-stick control shall communicate all joystick data over the spreader control CAN bus. For ease of service and diagnostics the multi-stick control shall have the following easily accessible through the spreader control calibration menus:

1. Unique MIN/MAX adjustments for each joystick function (forward, back, left and right)

2. On-screen output status indicators for each PWM output

3. Audible and visible output error status indicators with flashing error codes for each joystick function

4. The multi-stick control joystick outputs shall be communicated over the spreader control CAN bus to the Valve Module. Spreader control outputs and joystick control outputs shall be operated on the same Valve Module, or multiple modules as necessary.

NOTE: ***See Attachment B for joystick configuration.***

___/___ 7. The electronic spreader control shall be designed for precise, closed-loop control of granular and pre-wet liquid applications and operate on a CAN Bus protocol. The Central Processing Unit (CPU) shall have keyed and color coded connections to prevent incorrect installation. The CPU shall be mounted in the cab with visual access to diagnostic LED's. Mounting of the CPU unit outside of the cab is unacceptable. The unit shall have USB connectivity for file and data transfer, Ethernet connection, a J1939 communication port for connection to the vehicle bus, a second CAN bus communication port for spreader-only data

YES/NO

use, a J1708 connection for a temperature sensor, and a RS-232 connection for AVL communication. The CPU shall have on-board diagnostics, which provide real-time status of CAN bus communication, processor activity, and power status. The CPU shall have a built-in audible alarm for diagnostic purposes. The CPU operating system shall NOT be Windows-based.

___/___ 8. The spreader control interface shall have two, color-coded, continuous rotation encoders for granular and spinner control. These encoders shall have integrated push buttons for blast mode and stand-by. The controller shall have a third multifunction 4-way joystick that has an integrated rotary encoder and push button, that can be used for menu navigation, prewet liquid control, or an additional conveyor function. There shall be four, two - way soft keys included in the interface that are generically labeled and user-configurable for different functions depending on the equipment needs. The controller shall also utilize iButton technology that is capable of using a Supervisor key to provide access to the calibration parameters without the access code. The entire operator interface shall be backlit and encased in flexible silicone material with wear-limiting coating applied to the base silicone material. The operator interface shall communicate on the spreader control system CAN bus.

___/___ 9. The spreader control display shall be a remotely-mounted, 7" diagonal Color TFT LCD, with a low-profile 16:9 widescreen format and minimum of 800X480 pixel resolution. LCD shall have variable LED backlighting. CCFL backlighting is unacceptable. The display shall include a scratch resistant polycarbonate lens with anti-glare coating. A power status LED shall be immediately visible on the front of the display and shall report display diagnostics including loss of CAN communication. Display unit shall have a built-in audible alarm. To avoid driver distraction, the display shall have no integrated dials or pushbuttons and shall not be touch screen. LCD shall communicate on the spreader control system CAN bus.

___/___ 10. The operator menus shall be color-coded to match the encoder knobs on the operator interface. The display shall be capable of displaying the following on-screen simultaneously: Granular material name, granular material set point and actual application rate including units of measure, pre-wet liquid name, pre-wet liquid set point and actual application rate including units of measure, spread width, road temperature, air temperature, material usage total, liquid usage total, vehicle speed, and current date and time. The operator shall have the option of selecting five data items to be displayed onscreen during operation. The display will also provide four warning light indicators for low oil level, body up, oil temp, and filter bypass. These warning lights are to be functional regardless of spreader operation or status.

___/___ 11. The display must provide visual indication that the spreader control is connected to a compatible AVL device, if equipped. The spreader control shall warn operator if communication with the AVL device fails at power-up.

YES/NO

___/___ 12. A proportional PWM driver and input module (Valve Module) shall be remotely mounted inside the hydraulic valve enclosure for control of both spreader control and joystick control outputs. The entire Valve Module shall be of rugged design for the mobile environment, and must meet p68 requirements for dust and water ingression. The Valve Module shall include a minimum of eight proportional PWM outputs with potted valve output connections. All outputs shall be protected against short-circuits. Outputs shall be current-compensated and have adjustable PWM frequency. There shall be a minimum of five switch-to-ground type inputs for monitoring hydraulic system inputs such as oil level, body up, Hi and low filter bypass, and oil temperature warnings. A minimum of two switch-to-ground type pulse train inputs shall be included in the Valve Module for connection of feedback sensors such as auger feedback and pre-wet liquid flow meter feedback. A keyed and color-coded connection shall be provided for CAN bus connection to the CPU module inside the cab. A second CAN bus connection must be provided for daisy-chaining of multiple Valve Modules within the valve enclosure. Diagnostic LED's shall be included for every input and output on the Valve Module, as well as a power status LED and CAN bus activity LED's. The Valve Module shall be potted. The Valve Module shall include a stainless steel legend plate with engraved text for easy cleaning and identification of Valve Module connections.

___/___ 13. The integrated spreader control and joystick control system shall be equipped with a qualified ESTOP device that immediately disconnects battery power from all outputs. All spreader control and joystick-operated outputs shall immediately cease to function and the system display shall inform the operator that the ESTOP device has been activated. The Estop device must remove power from all output devices, while maintaining power to the display and CPU for diagnostic purposes. Resetting of the ESTOP device shall not result in spreader control and joystick-operated outputs returning to an ON state without operator acknowledgement.

___/___ 14. The control center arm shall be mounted to the floor via a switch base cabinet that contains at least 8 rocker type switches rated to 15 amps each. The switch base shall be supplied an 80 amp contact relay. Each switch shall be protected via an auto reset breaker. Each rocker switch shall have a custom backlit LED legend.

The Control Center shall be a **FORCE America Patrol Commander MPJC Ultra series with a 6100 model spreader control.**

IV. INSTALLATION

___/___ 1. The installer shall be responsible to ensure the proper location of the body on the truck to obtain the best working results.

___/___ 2. Dump body hinge shall be recessed into the chassis frame and solidly welded.

___/___ 3. The cylinder saddle shall be solidly welded to angles that are bolted to the

YES/NO

frame.

___/___ 4. Battery on chassis will be disconnected anytime that welding is performed on chassis.

___/___ 5. All required components shall be supplied by the installer.

___/___ 6. Professional techniques and workmanship are required:

___/___ 1. No welding or cutting of chassis frame rails except as stated elsewhere in the specification.

___/___ 2. Welds must be chipped free of slag and thoroughly protected with white or black paint as appropriate.

___/___ 3. Improper mountings, poor welding practices, the presence of slag, hydraulic oil leaks or inadequate paint coverage will be cause for rejection.

V. MANUALS AND TRAINING

___/___ 1. Two (2) Operator Manuals.

___/___ 2. One (1) Service Manual.

___/___ 3. One (1) Parts Manual.

Note*: Service and parts manuals on CD will be acceptable.*

___/___ 4. A minimum of four (4) hours of operation and service/repair training for the hydraulic and spreader systems and control units for the Sarpy County Fleet Service Staff (Four (4) Personnel) is required.

___/___ 5. A minimum of two (2) hours of operator training for Sarpy County Public Works Department Staff is required.

VI. WARRANTY/GUARANTEE

___/___ 1. Full two (2) year unconditional warranty/guarantee on body, hoist, pump, line, reservoir, valves, controls and installation.

___/___ 2. Regular manufacturer's standard warranty, manufacturers statement of origin and complete pre-delivery inspection certificates required with truck at delivery.

___/___ 3. The manufacturer's standard warranty shall be stated in the bid.

___/___ 4. All warranty work shall be performed within one hundred fifty (150) miles of Sarpy County Fleet Shop at 15100 So. 84th Street, Papillion, NE 68046.

YES/NO

___/___ 5. Mechanical or body repair required under manufacturer's warranty prior to use of the vehicle by the County shall be the responsibility of the selling dealer, including the transportation thereof.

___/___ 6. Warranty to be effective from date of issuance of first assignment

State terms of warranty _____

_____

_____

_____.

VII. DELIVERY

___/___ 1. Delivery shall be to Sarpy County Fleet Service Department at 15100 South 84th Street, Papillion, Nebraska, 68046.

___/___ 2. Contact Fleet Services, 24 hours prior to delivery at (402) 537-6980.

___/___ 3. Specify delivery date: _____.

EXCEPTIONS/CLARIFICATIONS/COMMENTS

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

COMPANY NAME: _____

Sarpy County, Nebraska
Two (2) New Fourteen Foot (14') Dump Bodies with Hydraulic Systems
Bid Form

Company Name: _____

Make: _____ Model: _____

Year: _____

The undersigned, having carefully examined the specifications and other contract documents for furnishing Two (2) new Fourteen Foot (14') Dump Bodies with Hydraulic Systems, mounted on a 64,000 GVWR Tandem Axle Cab Chassis, for Sarpy County Public Works Department use, hereby propose to furnish equipment as specified for a cost as follows:

UNIT PRICE **$_____**

EXTENDED PRICE **$_____**
***Price are to be F.O.B. - 15100 S. 84th Street, Papillion, NE 68046**

DELIVERY DATE: _____

Company Information

Years in business: _____

# of employees _____

Total sales last 3 years _____
_____
_____

References

Company Name: _____
Address: _____
Contact Name: _____ Phone Number: _____
Date of Purchase: _____Email: _____

Company Name: _____
Address: _____
Contact Name: _____ Phone Number: _____
Date of Purchase: _____Email: _____

Company Name: _____
Address: _____
Contact Name: _____ Phone Number: _____
Date of Purchase: _____Email: _____

I certify that this bid is submitted in accordance with the specifications issued by Sarpy County. I affirm that the original Specifications have not been altered in any way. Any alteration of the original Specifications, outside of an alternate bid, may be considered grounds for refusal of the bid.

I acknowledge receipt of the following addenda (if applicable):

Addendum #1 _____
Addendum #2 _____

Attachments: **Warranty Information**
Literature/Cut-sheets – 3 sets (Detailed specifications or advertising literature with cuts or photographs)

_____ _____
Company Name Company Representative (Please print)

_____ _____
Authorized Signature Telephone Number

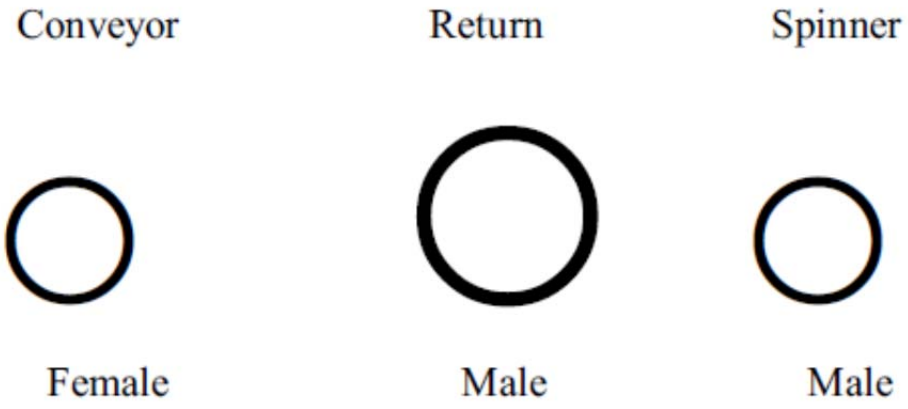
_____ _____
Address Fax Number

_____ _____
City, State & Zip E-Mail Address

***NOTE: Sarpy County is tax exempt and will provide the proper form upon request.**

Attachment A

Sarpy County Truck
Rear Hydraulic Coupler
Configuration for Spreader

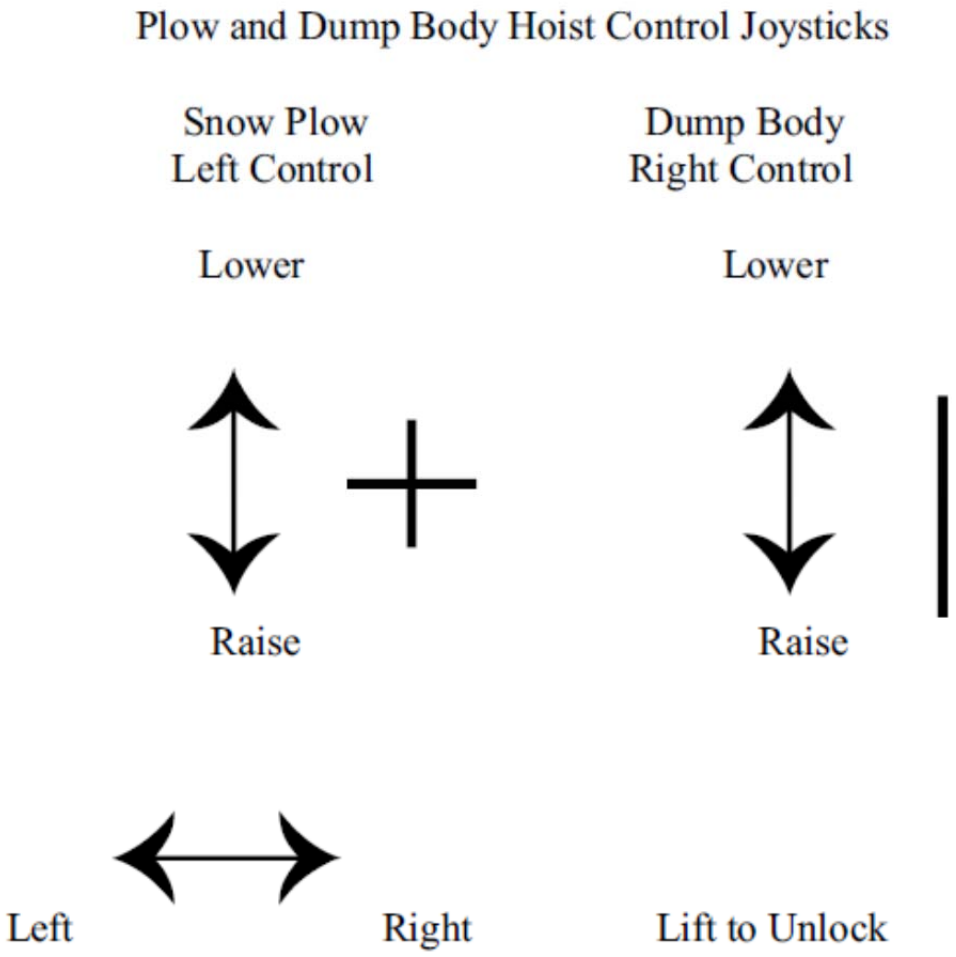


Couplers: AeroQuip 5600 Series

Conveyor and Spinner Size: ¾ inch (12-12)

Return Line Size: 1 inch (16-16)

Attachment B



Gen 4th # 225

APPENDIX P—INPUT/OUTPUT FUNCTIONS

WARNING! **These schematics show the intended use of the specified controls features which have been validated in the configuration shown. Any miswiring or use of these features which differs from that shown could cause unscheduled operation of the PTO or other unpredictable operation resulting in damage to equipment or property, personal injury, or loss of life. ALLISON TRANSMISSION IS NOT LIABLE FOR THE CONSEQUENCES ASSOCIATED WITH MISWIRING OR UNINTENDED USE OF THESE FEATURES.**

INPUT FUNCTION C. PTO ENABLE—SWITCHED TO POWER (WIRE 143)

USES: Permits PTO to be engaged only when engine speed and output speed are in allowable range and throttle is low. Also disengages PTO if speeds are exceeded.

VARIABLES TO SPECIFY: Minimum and maximum engine speed for engagement, maximum engine speed for allowable operation, minimum and maximum output speed for engagement, maximum output speed for allowable operation.

VOCATIONS: Various (with usage of PTO)

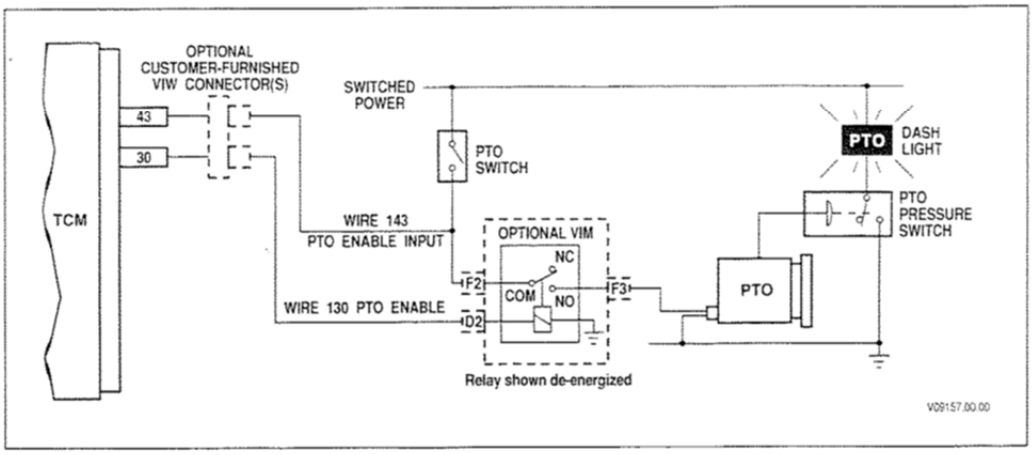


Figure P–3. PTO Enable—Switched to Power (Wire 143)

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Gen 4th # 225

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INPUT FUNCTION C. PTO ENABLE—SWITCHED TO POWER (WIRE 143)

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VARIABLES TO SPECIFY: Minimum and maximum engine speed for engagement, maximum engine speed for allowable operation, minimum and maximum output speed for engagement, maximum output speed for allowable operation.

VOCATIONS: Various (with usage of PTO)

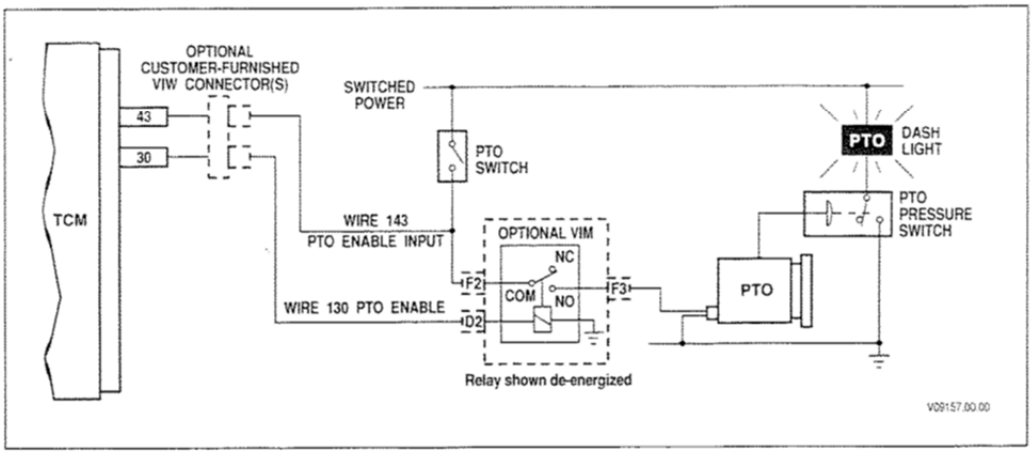

Figure P–3. PTO Enable—Switched to Power (Wire 143)

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